

REMARKS

Claims 1-26, and 29-41 are pending in this application. By this paper Claims 1, 2, 12, 13, 20-24, 26, 29-32, 34, 35, 39, and 40 have been amended, Claims 27, and 28 cancelled, and Claim 41 has been added, to more particularly point out and distinctly claim the subject matter that applicant regards as the invention. The amendments and new claim contain no new matter and are fully supported in the specification, see for example, paragraphs 59-64 and Figures 22-27 of the present application.

Objection to the Drawings

On page 2 of the pending Office Action, the Examiner objected the drawings under 37 CFR § 1.83(a), stating that the drawings must show every feature of the invention specified in the claims and that the subject matter of claim 29 must be shown. Applicant has amended Figure 22 to include a drawing illustrating the features of "a second set of vias . . . , wherein the vias in the second cluster of vias are coupled proximate their first ends to the second conducting plane . . . and proximate to the first conducting plane." The amendment to the drawings are fully supported because these elements were included in the original claims as filed, also see paragraphs 37 and 59. Applicant has also amended Figures 1-3, and 5 to include a legend designating the Figures as prior art.

Replacement drawings with "Replacement Sheet" in the top margin are presented in the "Replacement Drawings Sheets" accompanying this request for reconsideration.

Rejection of Claims Under 35 U.S.C. § 112

On page 3 of the Office Action, the Examiner objected to Claims 2-5, 12-21, 223-26, and 31-40 under 35 U.S.C. § 112 second [paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 23

The Examiner rejected Claims 2 and 23 stating that the phrase "the combined inductance and capacitance of the resonator elements" lacks antecedent basis, and that "the resonator elements" is vague and indefinite. By this paper the Applicant has amended Claims 2 and 23 so as to provide proper antecedent basis, as well as to recite that the combined inductance and capacitance is of the cluster of vias. Thus, Applicant respectfully requests that the objection be withdrawn.

Claims 12 and 31

On page 3 of the Office Action, the Examiner rejected Claims 12 and 31 stating that the phrase "the topology" lacks antecedent basis. Applicant has amended Claims 12 and 31 to provide proper antecedent basis.

Claims 20, 21, 39, and 40

On page 3 of the Office Action, the Examiner objected to Claims 20, 21, 39, and 40 stating that the phrase "the number and spacing of the vias of the cluster of vias" lacks antecedent basis. Applicant has amended Claims 20, 21, 39, and 40 to provide proper antecedent basis.

Double Patenting Rejection

On page 3 of the Office Action, the Examiner provisionally rejected Claims 1-40 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 10-39 of co-pending Application No. 10/796,398. Applicant notes that the double patenting rejection was indicated as "provisional." Applicants reserve the right to file a terminal disclaimer in this application upon the indication of allowable subject matter, or upon the patenting of the related case.

Rejection of Claims Under 35 U.S.C. § 102

On page 4 of the Office Action, the Examiner rejected Claims 1-6, 8, 11-14, 17, 20-26, 28-33, 36, 39, and 40 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,973,929 to Arakawa et al. ("Arakawa").

In rejecting the Claims, the Examiner asserted that Figures 6-8 of Arakawa disclose all of the limitations of Claim 1. Applicant respectfully submits that Arakawa does not disclose all of the limitations of Claim 1.

Arakawa describes that "a multi-layer printed circuit board 13 is constituted by alternately stacking three insulating layers 11a, 11b, and 11c, and four conducting

layers 12a, 12b, 12c, and 12d." And that "first conductive films 14 (14a, 14b, 14c, 14d) and second conductive films 15 (15a, 15b, 15c, 15d), which extend along the longitudinal direction (the right-and-left direction of FIG. 6) of the board 13 are formed in units of conductive layers 12 to be parallel to each other and in the vicinity of each other." (Arakawa Col. 9, lines 27-36 and Figure 6). Arakawa then describes that "The strip-shaped first and second conductive films 14 and 15 are respectively connected to first plated through-holes 16 and second plated through-holes 17 which are arranged at predetermined intervals and extend through the insulating layers 11 of the multi-layered printed circuit board 13." (Arakawa Col. 9, lines 36-41 and Figures 6-8). Arakawa discloses only "strip-shaped" conductive films, not conducting planes. Arakawa describes that "a capacitor is formed by a pair of through-holes." (Arakawa Col. 9, lines 12-13 and Figures 5D and 9D). Thus, Arakawa describes a technique for making a capacitor in a printed circuit board wherein the two plates of the capacitor are formed by through-holes.

In contrast to Arakawa, Claims 1 and 22 recite conducting pads that are capacitively coupled to the conducting planes. In other words, Claims 1 and 22 recite a capacitor formed between the conducting pad and conducting plane, unlike Arakawa who describes a capacitor formed between through-holes.

Applicant respectfully submits that Arakawa does not disclose all of the limitations of Claim 1 or 22. Thus, Claim 1 is patentable over Arakawa. In addition, Claims 2-21, and 41 depend, either directly or indirectly, from Claim 1, and are therefore also patentable. Applicant also submits that Claim 22 is patentable over Arakawa. In addition, Claims 22-26, and 29-40 depend, either directly or indirectly, from Claim 22, and are therefore also patentable.

Rejection of Claims Under 35 U.S.C. § 103

On page 6 of the Office Action the Examiner rejected Claims 7, 9, 10, 15, 16, 18, 19, 27, 34, 35, 37, and 38 under 35 U.S.C. 103(a) as being unpatentable over Arakawa. However, Claims 7, 9, 10, 15, 16, 18, 19, 27, 34, 35, 37, and 38 depend, either directly or indirectly, from Claims 1 and 22, and, as noted above, Claims 1 and 22 are patentable over Arakawa. Thus, Applicant respectfully submits that Claims

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Response to Office Action and Request for Reconsideration

7, 9, 10, 15, 16, 18, 19, 27, 34, 35, 37, and 38, are patentable over Arakawa and in condition for allowance.

Conclusion

Applicant respectfully submits that all the pending claims in the application, Claims 1-26, and 29-41, are patentable over all of the art of record and are in condition for allowance. Reconsideration and further examination of the application are requested. A Notice of Allowance is solicited.

Respectfully submitted,
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